

## Lanxess Durethan® T 40 ZS 000000 Partially aromatic polyamide

Category : Polymer , Thermoplastic , Nylon , Nylon, Aromatic

### Material Notes:

Partially aromatic polyamide, injection molding and extrusion grade, easy release, transparent in all wall thicknesses, isotropic shrinkage, mechanical and electrical properties largely unaffected by conditioning state

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Lanxess-Durethan-T-40-ZS-000000-Partially-aromatic-polyamide.php](http://www.lookpolymers.com/polymer_Lanxess-Durethan-T-40-ZS-000000-Partially-aromatic-polyamide.php)

Physical Properties	Metric	English	Comments
Density	1.18 g/cc	0.0426 lb/in <sup>3</sup>	ISO 1183
Water Absorption	6.0 %	6.0 %	Test Sim. to ISO 62
Moisture Absorption at Equilibrium	2.0 %	2.0 %	23°C/50% R.H.; Test Sim. to ISO 62
Viscosity Test	107 cm <sup>3</sup> /g	107 cm <sup>3</sup> /g	Viscosity number; ISO 307, 1157, 1628

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	90.0 MPa	13100 psi	Conditioned; ISO 527-1/-2
	110 MPa	16000 psi	ISO 527-1/-2
Tensile Modulus	3.00 GPa	435 ksi	ISO 527-1/-2
	3.30 GPa	479 ksi	Conditioned; ISO 527-1/-2
Charpy Impact Unnotched	NB	NB	ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	NB	NB	Conditioned; ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	NB	NB	ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	NB	NB	Conditioned; ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	<= 1.00 J/cm <sup>2</sup>	<= 4.76 ft-lb/in <sup>2</sup>	ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	

Mechanical Properties	$\leq 1.00 \text{ J/cm}^2$ Metric	$\leq 4.76 \text{ ft-lb/in}^2$ English	Comments Conditioned; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	$\leq 1.00 \text{ J/cm}^2$ @Temperature 23.0 °C	$\leq 4.76 \text{ ft-lb/in}^2$ @Temperature 73.4 °F	ISO 179/1eA
	$\leq 1.00 \text{ J/cm}^2$ @Temperature 23.0 °C	$\leq 4.76 \text{ ft-lb/in}^2$ @Temperature 73.4 °F	Conditioned; ISO 179/1eA

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	115 °C	239 °F	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	105 °C	221 °F	ISO 75-1/-2
Flammability, UL94	V-2	V-2	IEC 60695-11-10
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	V-2	V-2	IEC 60695-11-10
	@Thickness 3.20 mm	@Thickness 0.126 in	

Optical Properties	Metric	English	Comments
Transmission, Visible	90 %	90 %	transparent; thickness not quantified

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	IEC 60093
	1.00e+15 ohm-cm	1.00e+15 ohm-cm	Conditioned; IEC 60093
Surface Resistance	1.00e+15 ohm	1.00e+15 ohm	IEC 60093
Dielectric Constant	3.8	3.8	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	4.0	4.0	Conditioned; IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	4.3	4.3	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	4.6	4.6	

Electrical Properties	Metric @Frequency 100 Hz	English @Frequency 100 Hz	Conditioned; IEC 60250 Comments
Dielectric Strength	25.0 kV/mm	635 kV/in	IEC 60243-1
	28.0 kV/mm	711 kV/in	Conditioned; IEC 60243-1
Dissipation Factor	0.040	0.040	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.048	0.048	Conditioned; IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.090	0.090	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	0.11	0.11	Conditioned; IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Comparative Tracking Index	600 V	600 V	IEC 60112

Descriptive Properties	Value	Comments
Form	Pellets	
ISO Shortname	ISO 1874-PA 6I,GTR,12-030	
Processing	Injection molding	
Region	Asia Pacific	
	Europe	
	Near East/Africa	
	North America	
	South and Central America	

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